

ABSTRACT OF THE DISCLOSURE

A second-order bandpass IIR type digital filter, assuming that a sampling frequency is six times as large as a central frequency of a passing frequency band, a first-order input feedback coefficient b_1 is set at $-1 + 2^{-n}$ and a second-order input feedback coefficient b_2 is set at $1 - 2^{-(n-1)}$ (n : an odd number of 3 or larger). In this configuration, second-order IIR type digital filter with a simple arrangement and high accuracy can be provided. In a reference signal canceling apparatus, using such a digital filter, the reference signal can be canceled effectively and completely.